MULTIMEDIA UNIVERSITY ®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2017/2018

PCA0150 – COMPUTER APPLICATIONS

(Foundation in Information Technology/ Foundation in Life Sciences/ Foundation in Law)

14 OCTOBER 2017
2.30 p.m. – 4.30 p.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **THREE** pages (excluding the cover page).
2. Answer **ALL** questions.
3. Write your answers in the Answer Booklet provided.

Instructions: Answer **ALL** questions. Write your answers in the Answer Booklet.

QUESTION 1 [10 Marks]

a. The quality of LCD monitor or LCD screen depends primarily on several main factors. State and explain briefly **THREE (3)** of the factors.

(3 marks)

b. Julia is having some computer virus and performance problems. She tried **defragmenting** her hard disk but nothing changed. She was advised by a computer technician to **format** and **partition** her hard disk to solve her computer problems. Explain the terms that are bold and underlined.

(3 marks)

c. List **FOUR (4)** advantages for a project leader to use Project Management software in handling his or her project.

(2 marks)

d. There are various operating systems designed for all types of computers that provide similar functions. One of operating system's functions is the ability of multitasking. What is multitasking? Explain briefly the difference between foreground and background.

(2 marks)

QUESTION 2 [10 Marks]

a. List and explain briefly **THREE (3)** different types of broadband connections.

(3 marks)

b. Describe briefly how Global Positioning System (GPS) work.

(2 marks)

c. In a database, data is used to generate information. Many organizations realize that data is one of their valuable assets. Explain briefly why data integrity is important in a database?

(2 marks)

d. Program development consists of a series of steps which programmers use to build computer programs. There are six steps in the program development life cycle (PDLC). List and explain briefly **TWO (2)** control structure designs that could be found during step 2 in program development life cycle (PDLC).

(3 marks)

Continued...

QUESTION 3 [10 Marks]

a. What is the difference between *serif* typeface and *sans-serif* typeface? Which typeface is recommended to use when creating a document file and why?

(3 marks)

b. Discuss briefly how animation and video are made.

(2 marks)

c. Explain briefly the Internet and network attacks below:

(3 marks)

i. Botnet
ii. Denial of service attack (DoS)
iii. Spoofing

d. Define green computing in computer technology. Give **ONE (1)** example of contribution that user can do to promote green computing.

(2 marks)

QUESTION 4 [10 Marks]

a. You have a 5 years old computer now. The original specification for your computer is:

Processor	: AMD Phenom II X6 1100T
RAM	: 2 GB DDR-II 800MHz
Hard Disk	: 320GB Sata
Graphic Card	: AMD Radeon 5870XT
Monitor	: 17 Inch widescreen LCD
Sound Card	: On board soundcard
Power supply	: 400 W normal power supply unit (PSU)

If you are going to upgrade this computer in order to cater for 3D Rendering process, which **THREE (3)** components will you upgrade and why?

(3 marks)

b. If you are going to move around a lot and you need the data always ready by your side, what are the **TWO (2)** storage media suitable for you? Briefly explain your answer.

(2 marks)

c. Brian Stark wanted to start up a new company, called as Holo Element. In his company, he would do documentation, accounting transactions and presentations for his client. Suggest to him the **BEST** category of application software he could use for his company. Identify an example of software for each of the task that Brian have to do.

(2 marks)

Continued...

d. Sketch and label the **THREE (3)** network topologies when designing a network.

(3 marks)

QUESTION 5 [10 marks]

a. Loki wanted to create a database to catalogue all creatures in the forest and their unique features. To correctly portray the species, names, the physical and behavioral features each creature has, suggest to Loki **THREE (3)** relevant fields for her database and their data types.

(3 marks)

b. Write down the pseudo code to solve the problem in finding the total perimeter of a rectangle. The formula to find the perimeter is:

Perimeter = 2 x (Height + Width)

The program should read the values for Height and Width and output the total perimeter.

(3 marks)

c. If you wanted to send a video to your friend using your smartphone, among AVI, MPEG and QuickTime .MOV, what is the most suitable video format if your biggest concern is the file size? Support your answer with an explanation.

(2 marks)

d. Explain briefly **TWO (2)** ways on how you can detect if someone is trying to access your wireless home network connection.

(2 marks)

End of Paper